

# Opportunities for collaboration

November 26<sup>th</sup>  
ICT2008, Lyon

# iCubs in Europe



At the end of Y5 of RobotCub we will have 18 working platforms



# Promoting the iCub

- RobotCub Open Call
  - 31 participants, 6 winners will receive a copy of the iCub free of charge
- Further development
  - FP7 project ITALK: 4 iCub's will be built, language
- Collaborations
  - Univ. of Karlsruhe: new and longer legs
- Simulator:
  - Both Open Source and as a model in Webots



# RobotCub Open Call results

## Institution

Dept. of Computing/Dept. of Electrical Engineering, Imperial College, London

Institute for Intelligent Systems and Robotics. Université Pierre et Marie Curie - Paris

Human and Robot Cognitive Systems Group, INSERM U 846 Stem Cell and Brain Research Institute, Lyon

KOVAN Research Lab, Middle East Technical University (METU)

Image Understanding and Knowledge Based Systems, Technische Universität München, Munich

Institute of Audiovisual Studies, Universitat Pompeu Fabra, Barcelona

## Project title

Embodied cognition using internal simulation and a global workspace

[Motor, Affective and Cognitive Scaffolding for iCub \(MACSi\)](#)

Development of Shared InTentions and Cooperation in a Humanoid Robot via Situated SIMulation Models (SitSim)

Emergence of Communication in iCub through Sensorimotor and Social Interaction

iCubKidManS: iCub development of Kids' Manipulation Skills

DAC-iCub: An integrated anthropomorphic neuromorphic cognitive architecture for the iCub

## Investigators

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Philippe Bidaud, Olivier Sigaud, Vincent Padois

Peter Ford Dominey

Erol Sahin

Michael Beetz, Alexis Maldonado, Federico Ruiz

Paul Verschure



# Summer School



# Format of the Summer School

- Only programming
  - C++ fluency required
- Two robots were available in the 2008 edition
  - iCub ran for 10 days almost 12 hours a day
- Focused tutorials
  - E.g. depending on the questions and difficulties
- Single or group 10-day projects



# Examples







# Research & Training Site

In Genoa at IIT

- Part of RobotCub dissemination plan
  - Supports visits (typically short) of students and researchers to work on a specific project using the iCub
  - One platform available typically with support: e.g. technicians and other researchers
  - Fluency and familiarity with the basics recommended
- Mechanism well tested already
  - 12 visits, one-two weeks long from the RobotCub partners in 2008
- From now on, more open to other researchers
  - Application: contact us, visits subject to discussion, feasibility study and approval



ITALK - Integration and T... x

http://www.italkproject.org/

**italk** *INTEGRATION AND TRANSFER OF ACTION AND LANGUAGE KNOWLEDGE IN ROBOTS*

EU ICT Cognitive Systems and Robotics Integrating Project

01. HOME x

02. PARTNERS x

03. EVENTS x

04. JOB VACANCIES x

05. PRESS x

06. RESOURCES x

07. PUBLICATIONS x

08. LOG IN x

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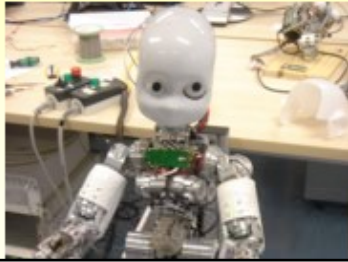
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**01. HOME**

The **ITALK project** aims to develop artificial embodied agents able to acquire complex behavioural, cognitive, and linguistic skills through individual and social learning. This will be achieved through experiments with the iCub humanoid robot to learn to handle and manipulate objects and tools autonomously, to cooperate and communicate with other robots and humans, and to adapt to changing internal, environmental, and social conditions.

The project will lead to

- x the development of new theoretical insights, models and scientific explanations of social and linguistic skills to bootstrap
- x new interdisciplinary sets of methods for language, action and cognition in h
- x new cognitively-plausible engineering principles and approaches for the



**Partners**

Univ. of Plymouth, UK  
Univ. of Bielefeld, Germany  
Nat. Research Council, Rome, Italy  
Univ. Southern Denmark  
Univ. of Hertfordshire, UK  
RIKEN, Japan  
MIT, USA

# More questions...

